© Crown copyright • www.metoffice.gov.uk

Why is it so cold and snowy?

30 November 2010

Snow and icy conditions have been affecting many parts of the UK through the late November but why has the weather been so cold with heavy snow?

Ewen McCallum, Met Office Chief Meteorologist explains some of the reasons behind the intense and prolonged cold weather that we have been experiencing.

“Normally, our winds come from the west keeping our winters relatively mild. However, during November (like last winter) we have seen a large area of high pressure develop in the Atlantic, causing a ‘block’ to the westerly winds that tend to keep us that little bit milder. As a result this has allowed very cold Arctic air to move south across mainland Europe.

At this time of year, the long nights over the landmass of Europe cool down rapidly and so the air has remained bitterly cold. However, this air has had to cross a relatively warm North Sea to get to the UK and has therefore picked up heat and moisture. Because the air is so cold, this has resulted in snow showers forming and with the wind coming from the east, it is coastal areas along the North Sea that have seen the heaviest snow. The localised nature of showers means that the amount of lying snow has varied greatly from place to place.

It is very unusual for a period of easterly winds to bring such heavy and prolonged snowfall. In fact for November, the amounts of snow this year have been the heaviest and most widespread in the UK since 1993 and the deepest November snow since 1965. Some of the highest snowfalls at 0900 on 30 November were at Nunraw, Scottish Borders with 44 cm and Kielder Castle, Northumberland with 40 cm. One reason why we have seen such large amounts of snow is that the pressure is much lower than normal allowing the air to rise and form deeper clouds, therefore producing heavier showers.

This cold spell has produced a minimum temperature of minus 18 °C in Wales and a provisional UK mean temperature which indicates that this November is likely to be the coldest across the UK since November 1993.

As we head into December and take a look at the Met Office outlook, there appears to be no abrupt end to this cold and snowy weather for some time, but as soon as our forecasters see a change we will let you know. Through the rest of this week, many central and eastern parts of the country will see further snow showers for a time. Daytime temperatures will struggle to climb above freezing and severe overnight frosts across much of the UK. The cold weather will be accompanied by fresh or strong winds in places, with the wind chill making it feel significantly colder.”

The latest weather forecasts and warnings

More about snow and how to report your snow observations

You might also be interested in…

- Health services
- Transport services

Related Internet links

- Advice on staying warm and well in cold weather (Directgov)

The Met Office is not responsible for the content of external Internet sites.

Contact information

Met Office Press Office: **+44 (0)1392 886655**

E-mail: Press Office

Met Office Customer Centre: **0870 900 0100**

If you’re outside the UK: **+44 1392 885680**